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ABSTRACT

A 2-year project was designed to reorganize basal reading instruction as to stress fluent reading and automatic word recognition. The reorganized reading program had three components: a redesigned basal reading lesson, stressing repeated reading and partner reading; a choice reading period during the day; and a home reading program. Over the 2 years of the program, students made significantly greater than expected growth in reading ability in all 14 classes. All but 2 children who entered second grade reading at primer level or higher (and half of those who did not) were reading at grade level or higher by the end of the year. Growth in fluency and accuracy appeared to be consistent over the whole year. Students' and teachers' attitudes toward the program were positive. In evaluating individual components, results indicated that self-selected partnerings seemed to work best and that children chose partners primarily out of friendship. Children tended to choose books that were about or slightly below their instructional level. In addition, children seemed to benefit instructionally from more difficult materials, with the greater amount of scaffolding provided in this program. (Contains 49 references, and 4 tables and 6 figures of data. An appendix presents interview questions.) (Author/RS)

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Fluency-Oriented Reading Instruction

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Winter 1997

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The National Reading Research Center (NRRC) is funded by the Office of Educational Research and Improvement of the U.S. Department of Education to conduct research on reading and reading instruction. The NRRC is operated by a consortium of the University of Georgia and the University of Maryland College Park in collaboration with researchers at several institutions nationwide.

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Fluency-Oriented Reading Instruction

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Abstract. *This paper reports the results of a two-year project designed to reorganize basal reading instruction as to stress fluent reading and automatic word recognition. The reorganized reading program had three components: a redesigned basal reading lesson, stressing repeated reading and partner reading; a choice reading period during the day; and a home reading program. Over the two years of the program, students made significantly greater than expected growth in reading ability in all 14 classes. All but two children who entered second grade reading at a primer level or higher (and half of those who did not) were reading at grade level or higher by the end of the year. Growth in fluency and accuracy appeared to be consistent over the whole year. Students' and teachers' attitudes toward the program were positive. In evaluating individual components, we found that self-selected partnerings seemed to work best and that children chose partners primarily out of friendship. Children tended to choose books that were about or slightly below their instructional level. In addition, children seemed to benefit instructionally from more difficult materials than generally assumed, with the greater amount of scaffolding provided in this program.*

Fluent and automatic word recognition has traditionally been considered the hallmark of a good reader. Yet, according to Allington (1983a), traditional conceptions of reading have ignored fluency as a goal. Instead, traditional classes have placed greater emphasis on accurate reading of more and more difficult material rather than fluent reading.

This paper documents an attempt to reorganize second-grade classes around the goal of fluency. We choose second grade because we see this grade as a transition between the simple and predictable material used in first grade to teach children to decode and the more complex stories and expository text used in third grade and higher.

Stages of Reading Development

Underlying our belief in the importance of fluency development in second grade is our view that reading is a series of stages, where development in one stage is dependent on concepts learned in previous stages and prerequisite for development in subsequent stages. The advantage of a stage model is that it pro-

vides a map describing what is to be expected at different levels of development.

Stage models assume that reading is qualitatively different at different stages of development. That is, a child who is at one stage will have different skills, knowledge, and beliefs about reading than a child at a higher or a lower stage. At each stage, the knowledge and skills needed for the next stage are being developed. There have been a number of stage models of reading including those of Doerhing and Aulls (1979), Downing (1979), and McCormick and Mason (1986). We will limit our discussion to Chall's (1983) model because this model essentially contains the basic features of the others, with greater elaboration.

Chall's model. Chall (1983) described the development of reading ability in six stages, ranging from pre-reading to the advanced reading typical of graduate students. Her approach is a global one, encompassing the development of decoding, comprehension, and critical evaluation. Because it is global, Chall's model describes broad trends in children's development as readers. Her stages are as follows:

- ***Emergent Literacy***.[1] In this stage, the child develops concepts about the forms and functions of literacy. Recent research has suggested that four areas are most important for success in initial reading: (1) phoneme awareness, or the ability to manipulate sounds in spoken words; (2) print concepts, or the awareness of the functions of print, such as directionality, print conventions, and some knowledge of spelling patterns in the language; (3) letter knowledge, or knowledge of the alphabet used; (4) knowledge of the language (vocabulary and syntax) that one is learning to read.
- ***Decoding***. In this stage, the student begins to learn about sound-symbol correspondences. The student's reading performance here is "glued to the text," in that she or he is trying to carefully reproduce what the text says. It often sounds like "grunting and groaning," because the child is not yet fluent.
- ***Confirmation and Fluency***. In this stage, the student learns both to decode words fluently and accurately, as well as to orchestrate the use of syntactic and semantic information in text to confirm word recognition. In this stage, the child moves from the short, simple, and possibly predictable texts of the Decoding stage to more complex texts with complex plots. At the end of this stage, children are viewed as able to decode much of what is in their knowledge base, limited mainly by vocabulary knowledge and world knowledge.
- ***Learning the New (Single Viewpoint)***. In this stage, children learn to use their reading skill to extract information from text. At this point, children are expected to learn from content area textbooks, with increasingly less teacher guidance.
- ***Multiple Viewpoints***. In this stage, the child synthesizes information from different texts, acknowledging multiple viewpoints, but still keeping them separate from one's own.
- ***A World View***. In this stage, adults develop the selectivity to weigh information and to add information from text to their world view.

[1]Chall uses the term "Readiness," but we have adopted the term "Emergent Literacy" as more consistent with the field.

Chall's model is useful for examining how literacy develops over time and has important implications for instruction. For example, beginning reading instruction for children who lack phoneme awareness is likely to result in reading difficulty. Juel (1988) found that no child who ranked in the lowest 25% in phoneme awareness at the beginning of first grade ranked higher than the lowest 25% in reading achievement by fourth grade. This finding has been replicated a number of times (see Adams, 1990).

Although each stage builds upon concepts developed in the previous stages, holding children at a stage for too long can also be detrimental to their growth. Holding children to a standard of word perfect oral reading, which might be appropriate for a child in the Decoding stage, may retard their use of context cues typical of the next stage. For example, if students are corrected for each deviation from the text whether it makes sense or not, they may not develop the risk-taking skills needed to use context and may concentrate on saying the words "right" and not on the construction of meaning (Allington, 1984).

A literal reading of Chall's model may slightly distort the actual development of reading at various stages. By concentrating on the development of automatic word recognition during the early stages, Chall may appear to slight the comprehension that also occurs during the early grades. Although the development of automatic word recognition is the hallmark of these years, children's basic comprehension abilities also are growing at this time. As Adams (1990) points out, given the interactive nature of the reading process, children's word recognition and comprehension abilities are intertwined. Children learn to recognize words quickly and automatically in the process of reading them in connected text for the purpose of comprehension.

Transition from Decoding to Automaticity

The transitions in this model are extremely important. The transition between Emergent Literacy and Decoding is effected usually with instruction, although there are a number of self-taught readers who make the transition on their own (see Durkin, 1974). The transition between initial decoding and automaticity may come only with practice. Samuels (1985; Samuels, Schermer, & Reinking, 1992) argues that automaticity comes out of children's practice through wide reading of different texts and/or repeated readings of the same texts. Samuels reviews the work done on repeated reading and concludes that ample evidence exists that such practice does improve automaticity

Although Samuels (1985) allows that wide reading can also improve automaticity, there is some evidence that wide reading is not enough. Carver and Leibert (1995) failed to find that reading library books improved the reading of children in grades 3, 4, and 5. Taylor, Frye, and Maruyama (1990) did find an effect for the amount of reading fifth-grade children did at school (but not at home). However, this effect was small, about 1% of the total variance (see Carver & Leibert, 1995). These studies and others (e.g., Anderson, Wilson, & Fielding, 1988) were done with intermediate grade children, using reading logs to measure time

spent on reading. Chall's theory suggests that reading practice is especially important at this transition point, so it is possible that wide reading might have a greater effect in second grade than with older children. Intervention studies such as those of Hoffman (1987), Morris and Nelson (1992), and Rasinski, Padak, Linek, and Sturtevant (1994) have found that fluency-oriented instruction has positive effects on second-grade children's reading.3

Hoffman (1987) describes an oral recitation lesson format to substitute for a traditional basal reader lesson. In this format, the teacher begins by reading the story from the reader aloud and discussing its content. In this way comprehension is dealt with prior to practice in oral reading. The teacher then re-reads the story, paragraph by paragraph, with the children following along and echoing back each paragraph. The students then choose or are assigned a portion of the text to master. They practice this text and read it to the group. They then go on to the next story. On their own, children are to practice the story until they can read it at an adequate rate with no errors. Hoffman reports that the lessons were successful, but does not present statistical data. Morris and Nelson (1992) found that a program based on Hoffman's, but including partner reading rather than small-group work, helped children in one class develop word recognition skills. However, they did not use a control group and did not report statistical tests.

Rasinski, Padak, Linek, and Sturtevant (1994) used a similar format in their fluency development lesson; but instead of using basal reader stories, they used 50- to 150-word texts. Teachers read each text aloud, students and teachers read the texts chorally, and students practiced reading in pairs. Because of the short texts, teachers were able to do all parts of the lesson in a 15- min session each day. The only gains attributable to the treatment were in reading rate. There were no significant differences between the experimental treatment and the control in overall reading level as measured by an informal reading inventory.

Goals for our Fluency-Based Reading Program

Using the stage model of reading, the purpose of our fluency-oriented reading instruction was to help children move from the accuracy-driven decoding typical of the Decoding stage to the fluency and automaticity needed to take advantage of reading to learn. We hypothesized that children move through this fluency stage largely through practice in reading connected text for comprehension, using both repeated readings of the same text and wide readings of different texts. Therefore, we developed five goals for our Fluency-Based Reading Program. They were:

- **Lessons would be comprehension oriented, even when smooth and fluent oral reading was being emphasized.** This was important because we wanted the students to be aware that the purpose of reading is getting meaning, and that the practice they were undertaking would make them better comprehenders, not simply better word callers. Anderson, Wilkinson, and Mason (1990), in their analysis of oral reading lessons, found that maintaining a focus on comprehension during reading

lessons not only improves comprehension, but also improves children's word recognition skills beyond that of an emphasis on accuracy.

• **Children would read material at their instructional level.** Traditionally it is thought that reading material that is too difficult or too easy does not improve children's reading as efficiently as reading material that is well matched to the child's ability (Allington, 1984). As will be discussed, our findings question this assumption because children read material that was well-above their instructional level, with a great deal of scaffolding, and appeared to benefit greatly. We originally defined instructional level as the level at which they could read with 95–98% accuracy (Wixson & Lipson, 1991). Previous research (e.g., Gambrell, Wilson, & Gantt, 1981) suggested that children do very little reading of connected text at an appropriate instructional level, as little as 2 to 3 min per day. Our initial goal was to increase the amount of material that children read at this level. However, as will be discussed later, district constraints forced us to modify this goal so that we also increased the amount of reading children did above conventional instructional levels.

• **Children will be supported in their reading through repeated readings**. This was the key aspect of the reading program. Children read each story numerous times—through echo reading, at home with their parents, with partners, and by themselves. The repeated reading component of the program was intended to provide practice so that children would develop fluent and automatic reading. Samuels, Schermer, and Reinking (1992) and Rasinski (1991), among many others, suggested that students develop automaticity through repeated exposures to words in context. Repeated readings have been found to effectively improve the oral reading and comprehension of normally achieving students (e.g., Martinez, & Roser, 1985; Taylor, Wade, & Yekovich, 1985) and of disabled and developmental readers of various ages (e.g., Dowhower, 1989; Rasinski, 1989).

• **Children will engage in partner reading**. Partner reading provides an opportunity for students to read connected text within a socially supportive context. This context should both motivate children to read well and provide a supportive environment to aid the development of reading skill. For these reasons, partner reading is used by both traditional educators and those who adhere to a more holistic perspective (Routman, 1991; Vacca & Rasinski, 1992).

Partner reading was used for two primary reasons. First, it offered an effective alternative to round robin reading for increasing the amount of time that children spend reading orally. In round robin reading, children are spending only a small portion of the reading period actually reading text (Gambrell, Wilson, & Gantt, 1981). In partner reading, children are spending considerably more time engaged in text. A number of studies (e.g., Topping, 1987) have found that such approaches can increase the amount of engaged time spent in reading as well as encourage children to read more difficult material. Second, partner reading would allow teachers to monitor children's reading progress by going around the room and listening to children read. In

the lower grades, teachers often organize repeated readings as a paired reading activity.

• **Children will increase the amount of reading that they do at home as well as in school.** Since the school day is limited in length, we thought that children would gain significantly in reading proficiency with some practice at home. Anderson, Wilson, and Fielding (1988) found that even small differences in home-reading practice could make large differences in children's reading ability. Because the home circumstances of our children differed dramatically from school to school and from child to child, we tried a number of approaches. Several teachers connected the home-reading program with Book It™, a reading-incentive program. Other teachers included reading as part of the child's homework. One school was involved with a Reading Millionaires project (N. Baumann, 1996; O'Masta & Wolf, 1991). In this project, the number of minutes read by students in the whole school were tabulated, with the goal of reading one million minutes school-wide. The time spent in our project reading at home was added to the number of minutes that the school as a whole read. In addition, as will be discussed below, children were given structured assignments to read portions of their basal reading book at home as part of the lesson structure.

These five components have all been studied individually, but not as part of a total reading program. Implementing a total fluency-based program over a full school year creates a unique set of problems. One problem is maintaining interest in a program that involves rereading of the same text. Most evaluations of programs that involved repeated reading were either short-term or did repeated reading for only a portion of the day. In our program, we were worried that repeated reading both at home and in school would bore students and teachers alike. Another problem is that of dealing with diverse reading abilities. In our classrooms, for example, children ranged from virtual non-readers to children who could handle fourth-grade level material comfortably. These classes were in schools representing mixed to lower socioeconomic status children and were probably representative of similar populations. Providing both material and instruction that is appropriate to the different levels requires new organizational modes.

Developing a Reading Program

During the summer of 1992, two university-based researchers (Stahl and Heubach) met with four elementary classroom teachers,[2] two based in Clarke County, Georgia (Gwen Blackwell and Alice Kay Copeland) and two based in Greene County, Georgia (JoAnn Hayes and Nancy Gutherie) to discuss how these principles could be instantiated into a reading program. Our goal was to develop a plan for teaching reading throughout the year that would be flexible, adaptable to different classes and different stories, and focused on fluency. The plan also needed to have enough variety

[2]In this report, pseudonyms are not used for either teachers or schools. Their names are given because they co-created much of the program.

for both teacher and student so that it would not become tedious. Because of the need to make this instruction practical, we relied heavily on the teachers' experience in developing this program. Certain aspects, most notably monitoring children's reading using running records, were dropped or heavily modified based on teacher input. There were other givens or elements that had to be part of the program. For example, all teachers were committed to using basal reading programs, through both district policy and personal choice. Therefore, we had to design lessons around the basal material. Also, in Clarke County a new superintendent mandated whole class reading instruction. Therefore, we had to deliver lessons to the whole class. In Greene County, the classes were organized homogeneously; one of our classes was a high-achieving class and one was a low-achieving class. These different levels had to be taken into account.

Our meetings stressed one principle per week. We read descriptions of other fluency-based programs, such as Hoffman (1987), and discussed how those ideas would fit into the teachers' classrooms and into our overall goals. At the end of the summer we had a general plan for reading instruction.

The general plan had three components—a redesigned basal reading lesson, a home reading program, and a daily free-choice reading period. These will be discussed, in turn, below.

A Redesigned Basal Reading Lesson

Since all of the students in one school were required to read the same basal reading lesson, one at their grade placement, and many were reading significantly below grade level, we used repeated reading of the same material to help children be successful with more difficult material. We followed the logic of an Oral Recitation Lesson format, which has been effective in supporting children with reading difficulties (Hoffman, 1987), but made significant modifications.

Each story is different and requires a slightly different approach. Also, teachers and students need variation to maintain interest. We did not want to have a formula lesson; instead, we provided many options for the teacher to use. The basic structure of the lesson is shown in Figure 1.

Story introduction. In Hoffman's oral recitation format, the teacher begins by reading the story aloud and discussing it, using a story map. In this way, the teacher deals with comprehension prior to the fluency practice, keeping the lesson focused on comprehension. We followed a similar procedure with the teacher reading the story aloud to begin the lesson. Following this read-aloud, we used a variety of procedures to discuss the story, including story maps, traditional questions, student-generated questions, and other graphic organizers, including various types of story maps, plot charts, Venn diagrams, and so on. This usually comprised the first day's lesson.

Children who needed some extra help with the story were pulled aside for echo reading. If the story was particularly challenging, echo reading was done with the whole class. In echo reading, the teacher read a paragraph at a time, with the students echoing it back. This was

Fluency-Based Classroom Reading

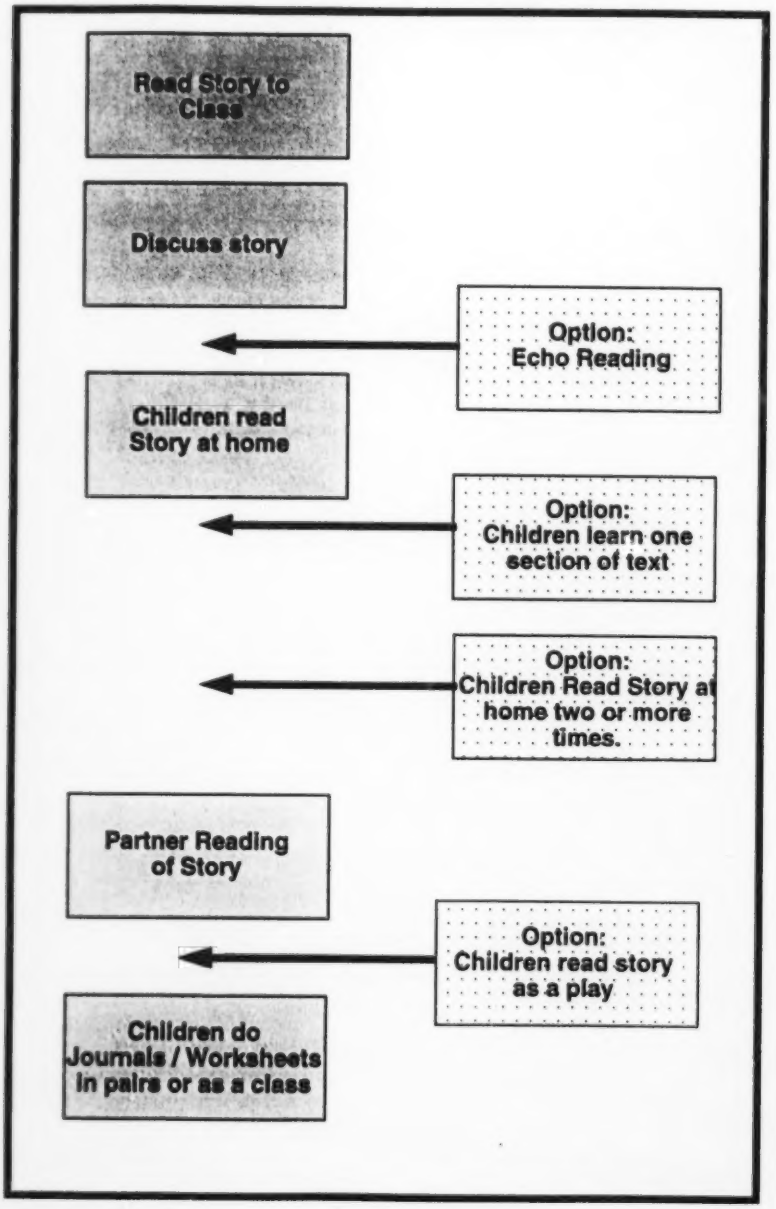
Read Story to Class
Discuss story
Option: Echo Reading
Children read Story at home
Option: Children learn one section of text
Option: Children Read Story at home two or more times.
Partner Reading of Story
Option: Children read story as a play
Children do Journals / Worksheets in pairs or as a class

Figure 1.

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done to scaffold students' recognition of words and to help them successfully read the story.

Partner reading. The next component was partner reading. Children were to read the story in pairs, with one member of the pair reading a portion of the story aloud and the other monitoring and providing assistance if needed. How large the portion was to be was agreed upon by the partners, but most often one child would read one page and the other child would read the next.

We tried a number of variations in how partners were assigned. Because of our formative study on partner reading, discussed below, teachers used self-selection for partner reading. One table at a time would get to choose their partners. The pairings varied throughout the year, depending on who was getting along with whom. We continued to observe cooperation, especially as the year progressed. Students also began to work in pairs during free-choice reading time, on their own.

Two more points need to be made about partner reading. First, it was difficult to set up in the beginning. It took several weeks of practice before the partner reading jelled and students knew what their roles were. Second, odd numbers were handled in different ways. Sometimes a group of three was formed. Sometimes the teacher read with the odd child. Generally, however, teachers avoided reading with children because this impaired their ability to monitor the reading throughout the class.

Additional instruction. The following day, the teacher worked with the journals that came with the basal reading program. Teachers varied in how they did this. Usually, journal pages were discussed as a whole class as a way of reviewing the story content. Students who were having difficulty were assigned to read the story one more time at home. In addition, teachers sometimes had students re-read portions of the story for performance or made the story into a play to provide more practice in reading.

Home Reading

Students did two types of reading at home. Students read the basal reading selection at home at least one or two days a week. The story was sent home the first day with the instruction for the student to read it to a parent or other person in the household. More able readers read the story to themselves, but most students read it aloud. We met with the parents before school started and talked about reading at home. Often parents sat with the child and followed along. But sometimes the child read while the parent was doing something else, such as making dinner. In many families, time is often short, so many alternatives needed to be provided. Parents were not able to read with their children every day, as evidenced by the responses to sheets that we sent home with the children, but there seems to have been a general effort to read at home. We also gave parents some guidance in how to correct errors. Because we met during Parent-Teacher Organization meetings, our time was limited. Consequently, we could not provide as extensive parent training as provided by Mudre and McCormick (1989), whose training procedure seemed to improve parents' response to their children's oral reading. Also, the percentage of parents who were able to attend this meeting

varied considerably, from two or three parents per class in one school to three-quarters of the parents in another school.

Students also were supposed to read a book of their choice. Children brought books from the school library, the class library, the public, or read books that they owned. The object of the home reading program was to extend the amount of practice that students do by adding to the school day.

Free-Choice Reading Period

The teachers encouraged students to read a variety of books on their own. The purpose of this reading time was to increase interest in reading as well as to promote reading at the students' own level. The teachers provided periods of time (15–20 min) for independent reading and students were also encouraged to read as they completed assignments throughout the day.

Evaluation of the Study

We used the following questions about this intervention to guide our examination of this program.

- **Can a fluency-oriented reading program be sustained over a full year?**

Although most of the approaches used in our re-organization have been tested before, these tests have generally been of short durations, usually one or two months at the most. Because lesson structure involved repeated readings of the same text, some observers thought that either the children or the teachers would tire of the procedures, leading to negative attitudes.

- **Does the program lead to gains in oral reading with comprehension?**

Because we are stressing oral reading in the program, we wanted to assess the program's effects on oral reading. But we did not want to produce word callers who decoded the text without comprehension, so we also assessed comprehension.

- **What happens during partner reading?**

Partner reading is a prominent feature of this program. The teachers in the program wanted to know what were the most effective pairings of students; we wanted to know more about why children chose each other, what were the dynamics of partner reading, and so on.

- **What are the effects of reading at home?**

We wanted to know whether differences in parental support of home reading would have an effect on children's gains in reading, but were unable to collect this data in a manner that was reliable.

- **What types of books do children choose during choice reading?**

If children are to benefit from reading during choice reading, they need to choose books that are at or near their instructional level. (At least this is the conventional wisdom, but see Carver and Leibert, 1995.) We wanted to examine the relative difficulty of books that children choose. We also wanted to see why children chose the books they did.

- **What are the effects of the program on struggling readers?**

Given Stanovich's (1986) notion of Matthew Effects and Allington's (1983b) observations about the differences in the amount of reading done by struggling and normally achieving

readers, we felt that radically increasing the amount of reading done would have an especially large effect on struggling readers.

Results

To assess the effectiveness of the program, we conducted a series of evaluations. Because this program is complex and was undertaken over the course of two years, the evaluation procedures are complex as well. Some evaluations used the entire population of children participating; others used only a sample of that population. Because the samples differ from substudy to substudy, they will be reported as traditional studies, with a description of the sample, methods, results and discussion.

The studies reported below come from questions that we had about the program, beginning with whether it could be sustained and whether it affected children's growth in reading to more specific questions about components of the program. Some of these questions were generated by the researchers; others came from concerns of the teachers participating. The first studies reported deal with questions concerning overall program effects, followed by questions about specific components.

Study 1—Overall Program Evaluation

Because of the nature of the program and our theoretical orientation discussed earlier, we used a measure of oral reading with comprehension to evaluate the program. The basic design used was a pretest-posttest design in which children's scores in August were compared with their achievement in May. (The first year we also included an interim measure in February.)

Traditionally, program evaluations are conducted with either an experimental or quasi-experimental design (Campbell & Stanley, 1966). In such a design, there is a treatment group and a control group. In our original plan for this study, we had planned to use the first year to develop the program, conducting only formative studies and one pretest-posttest evaluation. The second year was intended to be an experimental test of the program we developed during the first year. However, the results of the first year were so unexpectedly strong that we felt that denying treatment to a control set of classes was unethical. Therefore, we decided to use all of our classes as treatment classes, and we developed a pretest-posttest design to evaluate the program.

The logic for the analysis is that if the program is more successful than conventional instruction, children then will make greater progress on a standard measure of reading than the one-year growth expected in one year's time. If such growth occurs in a substantial proportion of the classrooms that we have worked with, we then can argue that this growth is due not to chance variations but to the effects of the program itself.

Participants. To assess the overall program effects, we used the entire population of students for both the first and second year. The student population during the first year consisted of 84 students, 49 in Oglethorpe Avenue School in Clarke County (Blackwell, Copeland) and the remainder in Greensboro Primary School in Greene County (Gutherie, Hayes).

The students at Oglethorpe Avenue were of mixed socioeconomic status. Approximately 60% were African-American, the remainder European-American. In Greene County, 85% of the students were African-American and were predominantly from homes with a lower socioeconomic status.

The student population during the second year was similar in characteristics to that used the first year, except it was considerably larger. We added an additional teacher at Oglethorpe Avenue School (Martha Cartwright) and added three teachers at Barnett Shoals School in Clarke County (Martha Cornish, Ric Oswalt, Mary Todd). We also added two more teachers in Greene County (Barbara Dean, Stephanie Hart). Of the six new teachers, one teacher was male, the remainder female, two teachers were African-American, the remainder European-American. Two of the new teachers had fewer than five years experience; the remainder had more than ten years experience.

The second-grade students who participated from Oglethorpe Avenue and Greene County were demographically similar to those who participated the first year. The additional students from Barnett Shoals contained a wider variety of parental backgrounds. Approximately 40% of these students were African-American. We had an exceptionally high rate of mobility during the second year. We included, at some point, 180 different students, but only 125 were present from the beginning to the end.

Procedure. All students participating in the project were given the Qualitative Reading Inventory (QRI, Leslie & Caldwell, 1988), an individually administered informal reading inventory, during the first month of school and the last month of school. During the first year, the QRI was administered in February as an interim measure. The QRI was chosen because this measure gave equal emphasis to oral reading and to comprehension, matching our program objectives. According to the material in the manual, alternate form reliability was high. This was assessed by calculating the reliability of decision making using the individual passages of the test. For the eight levels of the test, Leslie and Caldwell (1988) report that all reliabilities were above 80% and three-quarters were above 90%. In addition, Leslie and Caldwell report the concurrent validity of the QRI, as measured by the correlations between instructional level on the QRI and performance on an unnamed standardized achievement test, ranged between .44 and .72 with the majority of correlations above .70.

Year One. Figure 2 shows the QRI results for the first year. As shown on that figure, students made an average gain of 1.88 grade levels in their instructional level over the course of the year. This gain was uniform for all four classes. The ordinary assumption is that students will average about one year's growth in one year's time. We compared the actual growth to this assumed growth through a series of t-tests. For each class, we took the mean growth and tested whether it was significantly different from one. In all four classes, the growth over the year was significantly greater than one year, all $p < .01$.

Furthermore, as shown in Figure 3, gains were made by students entering at different reading levels. That is, the average child entering second grade reading below the primer

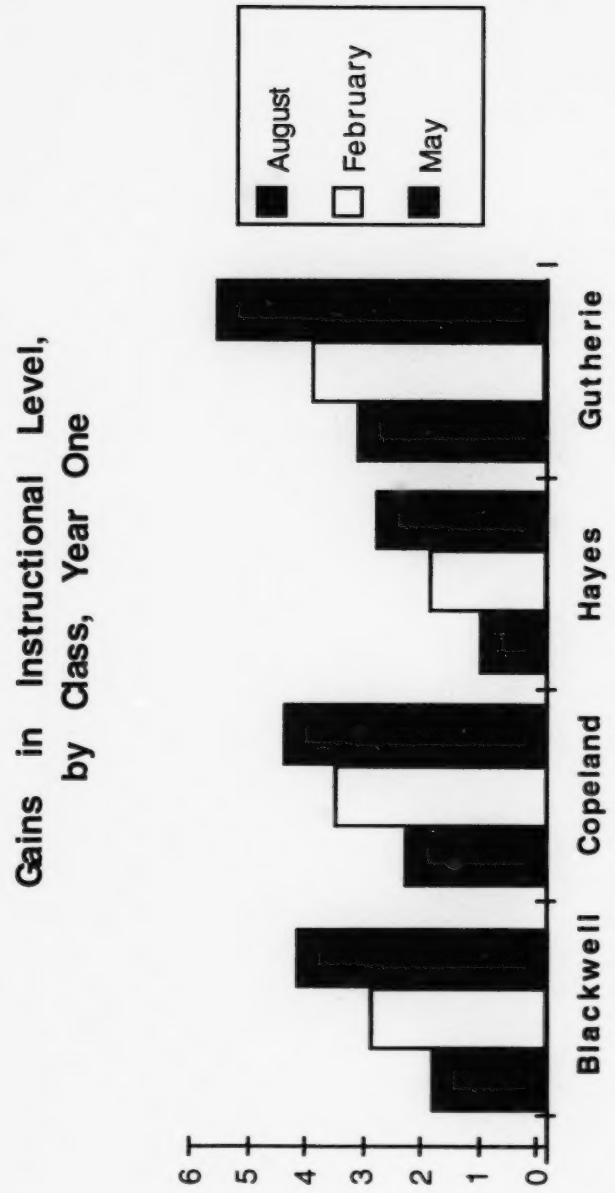

Gains in Instructional Level, by Class, Year One
August
February
May
Blackwell
Copeland
Hayes
Gutherie
0
1
2
3
4
5
6

Figure 2.

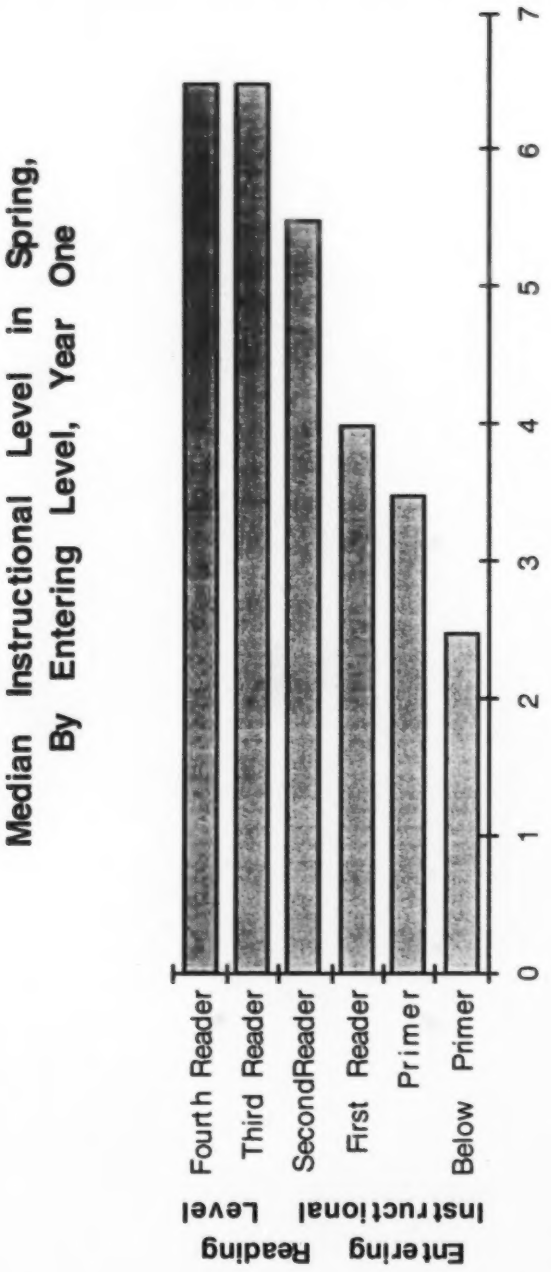

Median Instructional Level in Spring,
By Entering Level, Year One
Entering Reading Instructional Level
Fourth Reader
Third Reader
SecondReader
First Reader
Primer
Below Primer
0
1
2
3
4
5
6
7

Figure 3.

level made an average of two years progress during the course of the year. The average child reading at the third-reader level in the beginning of the year made a gain of three years during the school year. Of the 85 students in the four classes, only 3 were still unable to read the second-grade passage by the end of the year.

Year Two. The second year pretest-posttest evaluations are shown in Figure 4. As can be seen in this figure, the yearly gains were nearly as high, averaging 1.77 years' growth in instructional level. Again, for each class, we took the mean growth and tested whether it was significantly different from one. In 8 of the 9 classes,[3] the growth over the year was significantly greater than one. All but one tested at $p < .01$, and the remaining class made approximately one year's gain in one year's time.

As shown in Figure 5, children at all entering reading levels made gains in the second year as they did in the first year. Again, these gains were relatively uniform. Children who entered second grade reading below the primer level had ended with an average instructional level of 2.25, somewhat below the second-grade level (which we would have coded 2.5). Of the 20 students who could not read a primer passage at the beginning of the school year, 9 were reading at a second-grade level or higher by the end of the year, and all but one could read at a primer or higher level. This suggests that this program was successful even for children who would ordinarily have a great deal of difficulty learning to read. Of the remaining 105 students who had pretest and posttest data, only 2 failed to read at the second grade level or higher by the end of the study. Both of these students began reading at the primer level and were able to progress only to the first-reader level.

Thus, for all 14 classes over the first two years of the project, students made significantly more progress than one year's growth in one school year. By the logic discussed earlier, we maintain that this indicates that fluency-oriented reading instruction is more effective than conventional instruction.

Study 2—Growth of Rate and Accuracy

To examine the development of fluency over the course of the year, we initiated a series of fluency checks during the second year. We operationalized fluent reading as reading that is both rapid and accurate. Therefore, to examine fluency, we looked at both accuracy and rate. The purpose of these checks was to examine the effects of each lesson on children's accuracy and rate of reading the basal reading selections. We also wanted to see how readers of different entering abilities developed over the course of the year.

Participants. The participants in these sampling studies were the students in the six classes in Barnett Shoals and Oglethorpe Avenue Schools. Because there were different numbers of students in these classes during the year, the numbers varied. There were 91 students sampled in November, 87 in January, and 89 in May.

[3]Guthrie and Hayes, two of our original teachers, team-taught a combined, larger class. Their children are reported together.

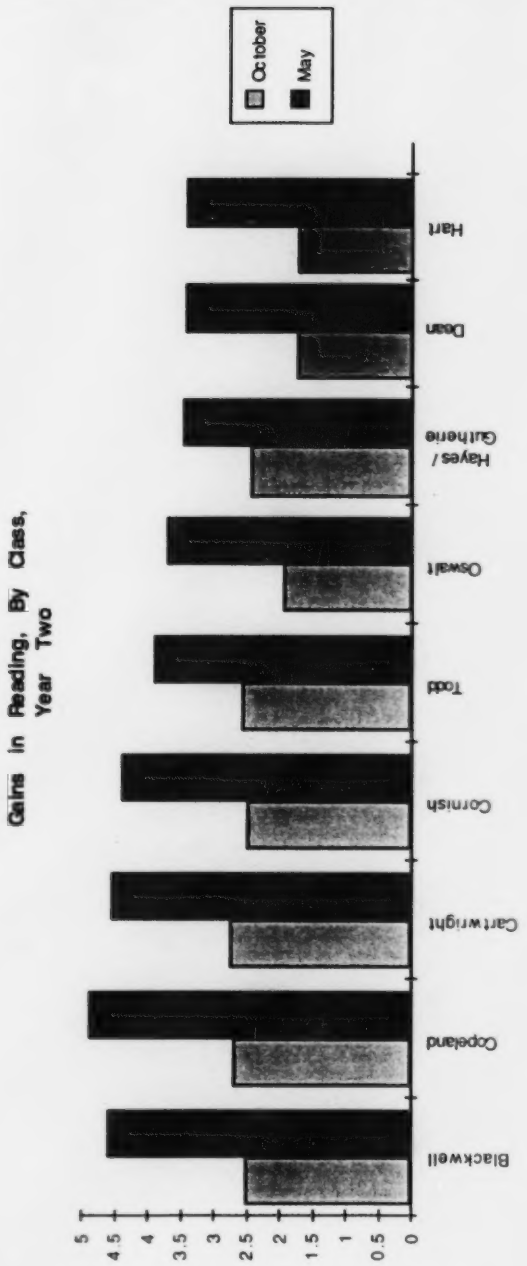

October
May
Gains in Reading, By Class, Year Two
Hart
Dean
Hayes/ Guthrie
Oswalt
Todd
Cornish
Cartwright
Copeland
Blackwell
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0

Figure 4.

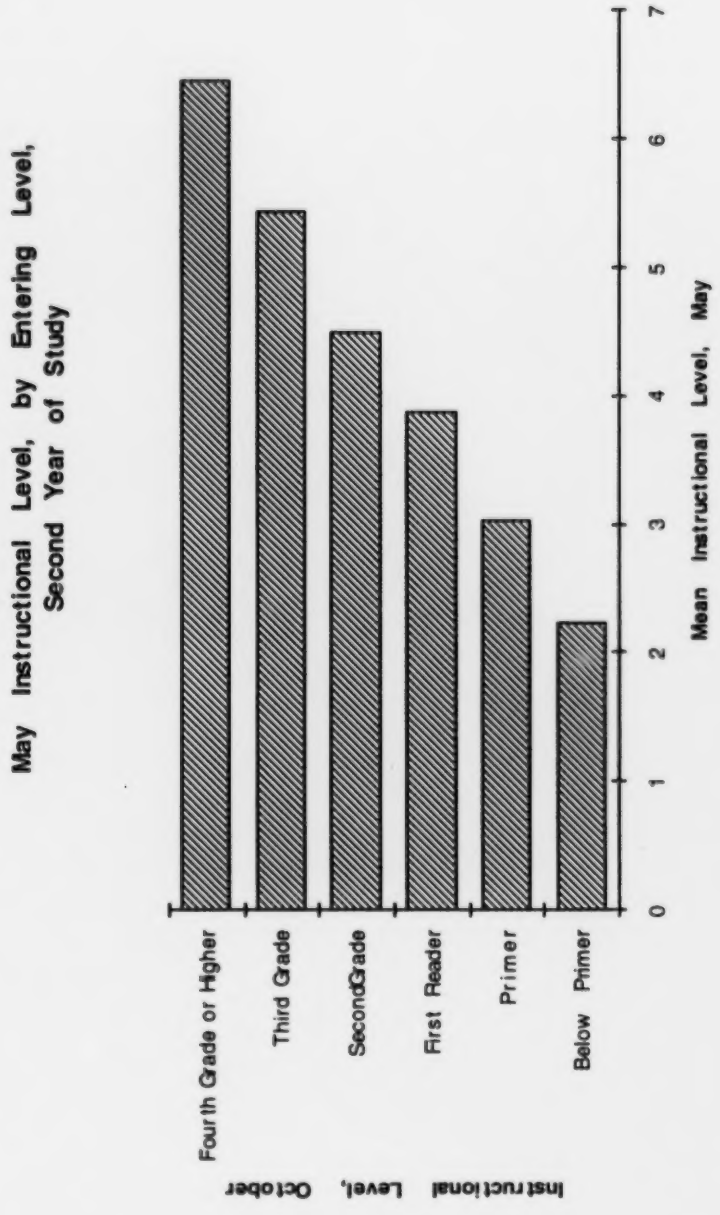

May Instructional Level, by Entering Level, Second Year of Study
Mean Instructional Level, May
0
1
2
3
4
5
6
7
Instructional Level, October
Fourth Grade or Higher
Third Grade
SecondGrade
First Reader
Primer
Below Primer

Figure 5.

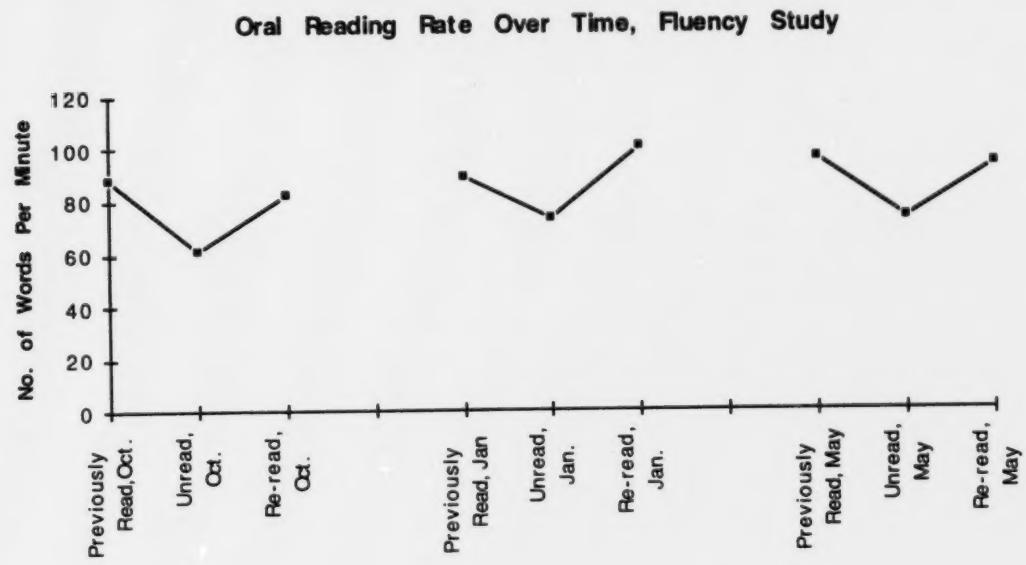
Method. These fluency checks were conducted over a two-week period. At the end of the first week, after the teacher had finished a story, children read orally two selections of between 150 and 200 words. The first selection is taken from the story just completed; the second selection is from the story not yet read but to be begun the following day. The second week students re-read the selection from the story they had just finished. For each story segment, we noted both accuracy of word identification and rate of reading. These checks were given in November, February, and May. These checks allowed us to compare each child's reading of an unread story with one that was just completed and with their reading of the same story after a week of treatment. In addition, we could compare children's reading of the previously unread story, which could be considered a baseline, with their reading later on in the year, allowing us to assess progress in both accuracy and rate.

All deviations from the text were considered errors for the purpose of this study. We did not distinguish between meaning changing and non-meaning changing miscues in our analysis for higher interrater reliability.[4]

Results. The results from the checks (see Figure 6) suggest that students made significant progress in both rate and accuracy because of the practice (comparing the read story with the unread and reread stories), and are making progress over time (comparing the unread stories in November, January, and May). This progress is most pronounced from November to January, suggesting that the bulk of the children's reading growth occurred during that time period. This is similar to the results from the informal reading inventory given during the first year. We found that students made a gain of a full year in the four months between September and January, and somewhat less than that between January and May.

Looking at the growth over time at each level, as presented on Tables 1 and 2, it seems that there were different patterns of growth in rate and accuracy among children with different entering abilities. In terms of accuracy, children reading initially at a second-grade level or higher generally made little improvement in rate over the year as suggested by their reading of the unread selection. These students were generally reading the material at or above an instructional level of 95% accuracy (or a 5% or lower error rate). There simply was not much room for them to grow. For students who began the year reading below an instructional level of second grade, there were different patterns of growth. Again concentrating on the error rates for the unread selection, those children initially reading at the first-reader level dropped their average error rate from 9% in October to 6% in February and May. This improvement suggests that they raised their instructional level to that expected at their grade level. The error rate of children reading at or below the primer level in October dropped significantly on the unread selection, but remained considerably above the 95%

[4]In the instruction, however, teachers *did* make those distinctions. In our summer program, we made the distinction between miscues that change the meaning and those that do not, and our observations of the teachers indicated that they generally did not correct non-meaning changing miscues.


Oral Reading Rate Over Time, Fluency Study
No. of Words Per Minute
120
100
80
60
40
20
0
Previously Read, Oct.
Unread, Oct.
Re-read, Oct.
Previously Read, Jan
Unread, Jan.
Re-read, Jan.
Previously Read, May
Unread, May
Re-read, May

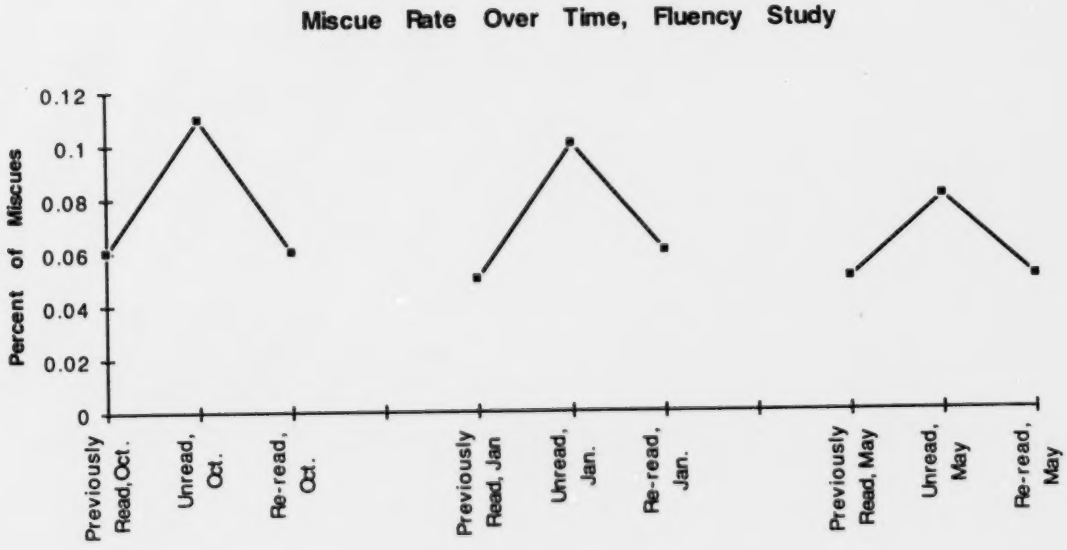

Miscue Rate Over Time, Fluency Study
Percent of Miscues
0.12
0.1
0.08
0.06
0.04
0.02
0
Previously Read, Oct.
Unread, Oct.
Re-read, Oct.
Previously Read, Jan
Unread, Jan.
Re-read, Jan.
Previously Read, May
Unread, May
Re-read, May

Figure 6.

Table 1
Error Rate, by Condition and Entering Level

	October			January			May		
	Previously Read	Unread	Re-Read	Previously Read	Unread	Re-Read	Previously Read	Unread	Re-Read
Below Primer	.16 (.09)	.25 (.10)	.15 (.09)	.13 (.08)	.20 (.13)	.12 (.12)	.11 (.05)	.19 (.09)	.12 (.09)
Primer	.08 (.04)	.18 (.06)	.06 (.03)	.06 (.04)	.11 (.04)	.04 (.02)	.07 (.04)	.12 (.04)	.06 (.03)
First Reader	.04 (.04)	.09 (.06)	.04 (.03)	.03 (.02)	.06 (.03)	.01 (.01)	.03 (.02)	.06 (.04)	.04 (.02)
Second Grade	.03 (.03)	.05 (.03)	.02 (.02)	.02 (.02)	.05 (.02)	.02 (.01)	.03 (.03)	.04 (.03)	.03 (.02)
Third Grade	.02 (.02)	.04 (.02)	.02 (.02)	.01 (.01)	.04 (.03)	.01 (.01)	.01 (.01)	.03 (.02)	.01 (.01)
Fourth Grade or Higher	.01 (.001)	.02 (.02)	.01 (.01)	.01 (.001)	.02 (.02)	.01 (.01)	.01 (.001)	.02 (.01)	.01 (.01)

Table 2
Rate, by Condition and Entering Level

	October			January			May		
	Previously Read	Unread	Re-Read	Previously Read	Unread	Re-Read	Previously Read	Unread	Re-Read
Below Primer	38.34 (14.12)	28.69 (12.96)	42.36 (20.75)	44.65 (19.42)	37.21 (11.74)	52.25 (21.30)	39.57 (14.25)	32.00 (12.25)	44.39 (16.63)
Primer	60.42 (17.34)	46.60 (13.22)	63.35 (17.48)	70.62 (19.18)	62.17 (23.29)	76.61 (23.11)	69.46 (21.48)	55.94 (21.93)	70.43 (19.16)
First Reader	76.70 (32.88)	55.12 (27.86)	74.85 (36.58)	97.98 (30.89)	74.81 (31.10)	111.22 (28.75)	95.37 (34.92)	62.16 (28.80)	78.89 (25.60)
Second Grade	92.08 (23.88)	69.92 (14.53)	91.30 (16.98)	103.96 (23.71)	79.72 (15.78)	114.37 (23.34)	108.92 (28.60)	84.68 (22.49)	108.64 (30.02)
Third Grade	111.02 (22.09)	78.29 (16.65)	106.21 (21.01)	114.05 (21.64)	93.67 (26.76)	131.27 (22.68)	122.88 (20.93)	90.95 (21.51)	120.50 (21.89)
Fourth Grade or Higher	143.38 (34.44)	104.18 (32.16)	128.36 (35.47)	138.15 (26.38)	124.78 (37.78)	153.86 (28.04)	149.24 (38.31)	119.06 (36.48)	144.37 (41.05)

accuracy level. With re-reading, though, children who began the year reading at a primer level were able to bring their error rate to near the 95% level, as evidenced by their performance on both the previously read and re-read stories. But the error rate of children who began reading below the primer level remained very low.

The results on the growth of accuracy mirror the pretest-posttest results. This program seems to be highly successful for children who begin the second-grade year with a reading level at or above the primer level; that is, for children who can recognize a simple corp of words. In Chall's (1983) stage model, discussed above, these would be children who are at the Decoding stage or higher.

Although children reading initially at a second-grade level or higher did not make gains in accuracy, they did make gains in rate, especially between the October and February sampling. Children at all levels at or above the primer made average gains of at level 10 words per minute from October to February. Between February and May, gains were inconsistent. Some groups of students read at somewhat lower rates in May than in February. The fall-off of those children who initially read at a first-reader level was dramatic, from 75 to 62 words per minute from February to May. An even larger fall-off occurred on their reading of the re-read selection. This may be nothing more than a problem with a particular passage or a somewhat different selection of students at different times due to absences. This was the group with the smallest number (9 or 10) and most susceptible to attrition effects. However, the average reading rate of even our most able readers, those initially reading at a fourth-grade level or higher, grew from 104 words per minute in October to 119 words per minute in May, suggesting that even these able students were making palpable gains.

Study 3—Student Attitudes

We were also concerned with the attitudes that students might have about the program. Because this program involved a great deal of repeated reading, we were concerned that students might consider it drudgery. We were especially concerned about gifted children's responses to this program. We worried that gifted children may feel like tutors in cooperative learning situations, especially where they were reading material below their own instructional level (see Martin, 1984). We wanted to question gifted and non-gifted children in our sample to assess their attitude toward the program. We also wanted to assess the attitudes of children toward the various components of the program—partner reading, home reading, choice reading.

To assess student interest in reading lessons, we individually interviewed a sample of students about their attitudes toward the program and toward reading in general. The interviews were conducted in April of the second year so that students had experienced nearly a whole school year of fluency-oriented instruction.

Participants. The sample consisted of 44 students from the three classes at Barnett Shoals Elementary School. They were the entire group of students present that day, excluding children who were receiving Chapter 1 services or special education services.

Procedure. Each child was interviewed individually by one of the researchers. The interview consists of nine questions, some of which were multipart. (These questions are included in Appendix A.) The questions were designed to examine students' attitudes toward the reading program and how they perceived components of the instruction. We transcribed the responses to the questions and rated them in gross categories. For questions that asked for an overall evaluation of the program or a component, answers were categorized as positive ("Good" "I like it a lot") or negative ("I don't like it") or neutral ("It's OK"). For other questions, two of the researchers categorized the responses by attempting to group together responses that contained similar wording or ideas. We agreed on both the gross categories and which responses fit under each category.

Results. Table 3 records the number of positive, negative, and neutral responses to the evaluation questions. As can be seen on this table, attitudes toward the program have been overwhelmingly positive from children of all ability levels.

Overall program. The main impression is that children of all ability levels and of both genders felt positive about their reading class. All students felt they had learned to read better this year. All but one student gave an overall positive rating to the program. (The one child who did not like the program was extremely gifted; he was reading at a seventh-grade level at the beginning of the year.) Three students were lukewarm in their responses ("It's OK"); the remainder were enthusiastic. When we looked at the various components of the program, students were enthusiastic about the home reading, the reading of the story by the teacher, and especially partner reading.

We categorized the responses to the questions of "What do you like about the reading program" and "What don't you like about the reading program" into broad categories of responses. The largest number, 19 children, liked something about the stories or the materials they could read (e.g., "read a lot of books, chapter books," "finding out what's in the story," "get to read the good"). The next largest number, 10 children, mentioned something that we categorized as having to do with self-efficacy, or the reader's sense of competence as a reader. In this category were mentions of practice and growing skill. Examples include "learning how to read good and practice," "learning new words," and "you can find out stuff." The only program component mentioned was partner reading, which was mentioned by seven children, and an additional five mentioned external motivation, including participation in the Book It program and the Reading Millionaires project (N. Baumann, 1996).

When asked what they did not like, children tended to mention factors involving length or difficulty of the stories (e.g., "takes some people a long time to read," "some books have too many words"). The next largest group of children could not come up with things they did not like. Ten children mentioned various aspects of the program that they did not like. There was no particular component, however, that was disliked by more than one individual.

Home reading. According to the interview, the median number of times a basal story was read at home was twice with a range from none

Table 3
Answers to Interview Questions

Overall Program			
Do you think you have learned to read better this year?			
	Yes	No	
Girls	13	0	
Boys	20	0	
Home Reading			
What do you think about (reading the story at home)?			
	Positive	Negative	
Girls	13	0	
Boys	15	1	
Do you practice reading the story at home?			
	Yes	No	Sometimes
Girls	19	3	2
Boys	16	4	1
How many times do you practice at home?			
1	5 Girls	4 Boys	
1 or 2	1 Girl	1 Boy	
2	6 Girls	2 Boys	
2-3	1 Girl	1 Boy	
3	3 Girls	1 Boy	
4	1 Girl	1 Boy	
5	2 Girls	3 Boys	
Choice Reading			
What do you think about DEAR time?			
	Positive	Negative	Sort-Of
Girls	13	0	0
Boys	19	0	1

Partner Reading			
What do you think about partner reading?			
	Positive	Negative	
Girls	13	0	
Boys	19	1	
Do you enjoy reading with (your partner)?			
	Yes	No	Sometimes
Girls	11	0	2
Boys	18	2	

to five days a week. When asked how this makes you a better reader, 22 provided some answer related to self-efficacy, 10 mentioned their family, and 4 mentioned the atmosphere. Again, we see the mentions of family as motivational, suggesting that these children largely see this component as providing both practice in reading skill and motivation for that practice. When asked how home reading improves interest, 9 mentioned self-efficacy, reflecting what appears to be a belief that greater competence in reading leads to greater interest. Examples include "if you read at home you can read books like S_____. If Mrs. C can't pronounce a word, S_____ knows it," "yes, it's fun, when you get the hang of it, it is fun," "yes, because I can be better at reading," and "yes, because when we read a book we know the words so we can make it more interesting and fun."

Choice reading. As noted on Table 2, children were uniformly positive about choice reading time. When asked how choice reading helps one read an approximately equal number of responses mentioned the importance of additional time for practice and the atmosphere conducive to reading. As carried out in these schools, choice reading could be individual or could involve a small group. Only two people mentioned working with a partner; two others mentioned some other aspect of social interaction. When asked why choice reading made one more interested in reading, seven responses mentioned the importance of an opportunity to sample (e.g., "yes, if you read you can see another book you want to read," "yes, we read different books after you get done with the first one," "yes, can read more books and know about them and want to read more") and two mentioned interest in a particular type of book. Six responses mentioned reading skill. As discussed above in regards to the home-reading component, these six responses may reflect a belief that greater skill in reading leads to more interest.

Partner reading. As noted on Table 3, nearly all students were positive about partner reading. When asked how partner reading helps you read, two categories predominated. Eighteen students mentioned some sort of assistance with words and 15 mentioned the social interactions. The social interaction statements seem to suggest that working with a friend is motivational ("because A_____ is my friend, she reads a little better than me and it helps me"). These results suggest that the students see partner reading much as we did when planning the program.

When asked how partner reading makes one more interested in reading, 10 also mentioned social interactions with another group mentioning more general self-efficacy. The largest group, however, was unable to provide reasons why it improved interest and four children said that it did not.

The majority of children mentioned friendship as the primary reason they chose their partners. Reading ability was mentioned by somewhat fewer than half of the children. When asked what level of reading ability they would prefer their partner to have, there was a wide variety of responses. Most children did not care about the level, but some preferred a child at the same level, some preferred to work with poorer readers, and some preferred to work with better readers. Those who preferred to work with better readers were nearly always children who were having reading problems.

These responses confirm a fuller study of partner reading done in the first year and discussed below.

Study 4—Partner Reading

Because partner reading was an important aspect of our program, both in the redesigned basal reading lesson and during the free-choice reading period, we wanted to find out what went on during partner reading. Our interest began with the teachers' questions about how best to organize partner reading, whether teachers should assign children to work in heterogeneous groups, as had been done in one class, or whether students should select their own partners, as had been done in another class. However, our interests were somewhat deeper. We wanted to capture, qualitatively, some aspects of what made partnerships function in our reading lessons.

To understand these questions, we conducted a qualitative and a quantitative analysis of data collected in two second-grade classrooms where partner reading is an integral part of reading instruction. We were interested in (a) the relative efficiency of different pairings of students, (b) the types of interaction taking place while children read in pairs, (c) the factors that influence decision-making within the pairs, and (d) the factors that influence smooth and fluent reading.

We view partner reading as an example of a closed social circle embedded within a larger classroom context. We examined the functions of literacy within this smaller context and how these functions related to the goals of the classroom at large. In this study, literacy learning and paired reading are examined in relationship to the larger social fabric of the classroom.

Subjects. This substudy was conducted the first year, using the two second-grade classrooms from Oglethorpe Avenue School, with a total of 42 children. The children are largely from middle-class families of diverse ethnicity

and represent a range of reading abilities. In both classrooms a newly adopted basal is the foundation for reading instruction.

Method. During the first data-collection cycle, children were assigned to partners in each of three ways—(1) pairs heterogenous in ability assigned by the teacher, (2) pairs homogeneous in ability assigned by the teacher, and (3) student-chosen pairs. This cycle lasted three weeks. Each child participated in each of the three selection conditions and thus served as his or her own control. Following each partner reading session, each child was given a segment of the basal reader text that was read during that session and asked to read it orally. A running record (Clay, 1985) was taken of this oral reading. The error rate following each reading was used to examine the relative efficiency of the different types of pairings.

The remainder of the time students chose their own partners. The students read in pairs after the basal story had been introduced and read orally to the class or individually by each student. The children also read in pairs during DEAR (Drop Everything And Read) time, which provides an opportunity for reading of self-selected books. In these classes there was an average of 15–20 min per day allotted to DEAR time. Children can choose to read alone or with partners during this time.

During the remainder of the observations, data were collected from multiple sources, including (a) audio recordings of 6 target students (3 from each class) as they read with a partner, (b) video recordings of pairs of students, (c) field notes taken as the students participate in paired readings, (d) interviews with the students and the teachers, and (e) running records of samples of material read using the partner reading sessions. We collected data from October to March, revisiting each class every four weeks. There were a total of six data-collection cycles, 1 three-week cycle in which both the quantitative and qualitative data were collected, and 5 one-day observations in which only qualitative information was gathered.

Analysis. The qualitative data analysis was done simultaneously with its collection using the constant comparative method (Glaser & Strauss, 1967). The analysis began with the collection of data through observation and taping of paired reading sessions. Immediately following the paired reading, one researcher took the students out individually and gave them a structured interview relating to their perceptions of partner reading and the reasons for their choices in partners. The interviews and tapes were transcribed and reviewed. After transcribing, that researcher looked for patterns as initial categories and relationships emerged. Subsequent collection cycles were used to confirm or disconfirm initial assertions about the social interactions taking place during paired reading.

The running records were used as a dynamic measure of reading level to note whether students were working on the same level or not. They were also used to compare the effectiveness of the three different partnering situations.

Quantitative Results. The running records were analyzed to look directly at the effects of different partnerings on student reading. We did not find a significant difference between types of pairings. (The results are presented in Table 4.) However, the level of performance

Table 4
Partner Reading, Grouping Study

	Self-Selected Grouping	Heterogeneous Grouping	Homogeneous Grouping
Mean	.94	.93	.91
Standard Deviation	(.09)	(.11)	(.11)

was so high that a ceiling effect might have obscured real differences. All children who initially read at a level of primer or higher could read second-grade material at an instructional level (approximately 95% or higher) or close to it. Of those who read below the primer level, half could read second-grade material at an instructional level. This suggests that the support discussed above is useful in helping nearly every child read successfully in grade-level materials. Confirming the qualitative analysis, selecting one's partner seems to produce better results, especially with lower achieving readers.

Qualitative Results. The major assertion generated from the data analysis was that the relationship the children shared before they paired for partner reading not only helped to determine their choice of a partner but guided their actions during reading as well. This relationship seems to be the most important factor in determining how effectively students work together in completing the paired reading task. Analysis of this data indicates that a positive and established relationship between the partners is important for effective partner reading.

The most important relationship for the students was that of friendship. When asked how a certain person became a partner, the majority of students responded with remarks that were categorized as "friendship." For example, one child, when asked how Peter became his partner, responded "I play kickball with him everyday." With only one exception, children accepted the partner who had chosen them even if that person is not someone they would have chosen themselves. Data from the teacher interviews confirmed that children tended to pick partners with whom they are getting along at the moment.

Although friendship was the main property of the relationship category, other factors were involved as well. Students were likely to work with others who had the same working style as their own. For example, a no-nonsense type reader who wanted to immediately get started would choose another no-nonsense type. Gender did not play much of a role in determining who was chosen for partner reading. Although same-gender pairs were the norm, it was not uncommon to find boys and girls working together by choice.

Each new pair of students had to work out procedures for reading the story. Decisions

were necessary about where to go in the room for reading, whether to read sitting or lying on the floor, who would go first, and how turns would be taken. This decision making was greatly affected by the nature of the relationship already established. If there were disagreements about procedure, the self-selected pairs worked these out without including the teacher or wasting real time. Often there was not a need to discuss procedures. For example, one pair was so in tune that when one child rolled over on his stomach, the other followed.

One of the key features of paired reading is the assistance that one child gives another when fluent reading breaks down. The most frequent form of assistance took place when a child could not read a word. The reader would stop, wait for the partner to provide the word, and then continue reading. Assistance appears to be connected to the relationship that is established before a paired reading session begins. When children already have a working relationship, they are more likely to ask for help when it is needed and assistance is given in a more efficient manner.

When off-task behaviors were noted, they often did not interrupt the reading when the pairs were self-selected. This is because the pairs had already established routines and ways of relating to one another. These behaviors became more frequent and were more likely to hinder smooth sailing when the partners were not self-chosen.

Study 5—Choice Reading

One of the assumptions in developing this program is that children should have ample time devoted to reading material at their instructional level. To develop fluency, it is important that children read material at or near their instructional level, which we defined initially as roughly 95% accuracy. Because we were required to provide whole class instruction using the basal reader, most children were reading material at or above their instructional level during that time. Relatively few second-graders were actually reading at second-grade level. For example, only 42 of the 152 students assessed at the beginning of the second year actually had a score at second-grade instructional level. Our assumption was that during the period of choice reading, children, both gifted and struggling, would be able to read material at their level. This assumption has not, to our knowledge, been tested.

One purpose of this substudy is to check whether students actually chose books that are instructionally appropriate. A second purpose is to develop a theory of why children choose the books that they do.

Method. We asked children in two classes to fill out logs of the books they were reading during SSR time for two weeks. Subjects in this study were 43 students in the two Greene County classes during the first year of the program. After two weeks, we interviewed each child individually about why they chose these particular books and what criteria they use for choosing books in general. We also took one of the books that the child had read during the preceding week and did a running record on a small section of the book to find out its relative level of difficulty for the child. We used oral reading error rate as a measure of relative difficulty.

Quantitative results. In the running records, all children except one had chosen books that were at or near their instructional level. With one exception, students were able to read their chosen book with 92% accuracy or higher; the average was 95.5% accuracy. This rate suggests that students are choosing material near their instructional level but considerably more difficult than their independent level, which has traditionally been thought of as 98% accuracy (Wixson & Lipson, 1991). As noted below, we have reason to reassess this traditional notion.

The one student whose accuracy was considerably below this level (62%) was a child who was placed in a homogeneous above average reading class for reasons unrelated to his reading, but read significantly below the class average. He chose books that looked like those his classmates were reading, even though they were too difficult for him. We feel, bolstered by his interview, that he had chosen books for social reasons, to look as if he were competitive with his peers. If these results can be replicated, it suggests that SSR is a valid way of increasing children's fluency, becuase they will choose books that are instructionally appropriate. It also suggests that social pressures need to be taken into account in implementing SSR.

The students were also interviewed about their reasons for their choices. The teachers were a major influence. Books that the teachers had read to the class were chosen often. In addition, one teacher encouraged her students to read chapter books that challenged their ability in reading. These exhortations were mentioned often by her students. Students did not mention their peers as influences on their reading choice.

Discussion

As noted earlier, the studies used to evaluate this program were driven by a series of questions we had about the program. We had some of the questions prior to planning the program; other questions arose during the implementation and came either from the researchers or from the participating teachers.

Can a Fluency-Oriented Reading Program Be Sustained Over a Full Year?

Teachers' viewpoints. As noted above, for the first year of this study there were four teachers who developed the program. Three of the four teachers were highly experienced, each with more than ten-years teaching experience, mostly at second grade. The fourth teacher was in her fourth year of teaching. She had spent the past year teaching in a supplemental program aimed at low-income children. This year she was returning to second grade. One of the teachers was African-American; the remainder were European-American. All are female. All of these teachers would consider themselves traditional. They all had experience using basal reading programs and preferred to use such programs.

The second year we expanded our group to ten teachers. Our intention was to see whether the success of this program could be replicated with teachers who did not participate in the creation of it. All of the teachers participating during the first year also continued to participate during the second year.

At the end of the first year, the four teachers reported that they were very happy with the

procedures involved and would enthusiastically continue them into the second year. Of the ten teachers who participated the second year, all have reported that they are using the procedures this current year, even though we are no longer providing direct support. These results suggest that the program is sustainable over the course of the school year, and that teachers maintain their enthusiasm about the instruction.

Student effects. From the interviews, it also seems that students had positive attitudes toward the program. We found uniformly that students were positive about the program, both overall and about each individual component. Contrary to our fears, students did not seem to get bored with repeated readings. Instead, they said the repeated readings led to greater mastery of the material. When asked what they liked about the program, the majority of the comments concerned the stories they were reading. This suggests that students' focus was on the stories and not on the procedures used to teach the stories. Where they had complaints about the program, the majority dealt with the length or difficulty of the material that was read. There were some complaints about individual components, but no component was mentioned by more than one child.

When asked about individual components of the program, students felt positively about reading at home, about choice reading, and about partner reading. The same themes seemed to emerge from questions about these various components. When asked about how all three components helped to improve their reading, students tended to mention the importance of practice to improve one's reading. Social interaction, both with peers and parents, was also mentioned. When asked about interest, a proportion of students mentioned aspects of self-efficacy, suggesting that some students felt that improvement in reading ability was related to reading interest (see Nell, 1988). Other students mentioned the importance of being able to sample new books, of choice reading, and of atmosphere, such as a quiet room. Although nearly all students felt that home reading, partner reading, and choice reading improved interest, many did not articulate why they felt so.

Does the Program Lead to Gains in Oral Reading With Comprehension?

The results of our two-year study of fluency-oriented reading instruction suggests that reorganizing instruction so as to stress fluency seems to have had positive effects on second-grade children's growth as readers. These effects were most pronounced on children entering the second- grade year reading at a primer level or higher. Over the two years of the program, all such children but two were reading at grade level or higher by the end of the year. As might be expected, this program had its largest effects on measures of rate and accuracy in reading. Its effects on comprehension were significant because we used a measure of oral reading with comprehension as a pretest and posttest. We do not report results from standardized comprehension measures because of the difficulty of accessing such results. However, according to the teachers, the effects on standardized reading comprehension tests were less pronounced and did not seem to differ from those of previous years.

What Happens During Partner Reading?

Partner reading was the only aspect of the program mentioned by the children interviewed when asked what they liked about the reading program, and it was the most positively perceived. We found that having children choose their partners rather than having them assigned on the basis of reading ability was the most efficacious approach. In our study, such an arrangement did not lead to significantly higher achievement because the oral reading levels after repeated readings were very high for all arrangements. However, the management aspects of partner reading seemed to go easier when there was a friendship between partners. There were fewer disturbances, and off-task behaviors were more easily handled.

We found, in two separate sets of interviews, that friendship was the primary reason that partners chose each other. Help with reading was the secondary reason and, as might be expected, this reason was given by struggling readers. The social aspect of partner reading appears to have mitigated the effects of children reading at levels well above or well below their instructional level. As noted above, only about a quarter of the students in the second year of the program were reading at a second-grade instructional level at the beginning of the year. Those who were reading above grade level enjoyed partner reading as a way of sharing interesting stories with a friend. For those reading below grade level, the social aspect of partner reading made it easier to ask for and receive help.

What Are the Effects of Reading at Home?

This question could not be answered with our data. Although students perceived the process of reading at home positively, we felt that reading log data was not sufficiently reliable from which to draw conclusions. Students reported reading the story from the basal, with a median of one reading and a range of 0 to 5. We did find that students enjoyed reading at home and believed that it made them better readers. Some students enjoyed the opportunity to read in quiet; others enjoyed the interaction with their family. When asked whether reading at home made them more interested in reading, nearly all children said "Yes," but generally did not articulate why.

What Types of Books Do Children Choose During Choice Reading?

We had two concerns about the books children chose. First, we wanted students to choose books at an appropriate level. For a fluency-oriented program to work, children need to be practicing material at an appropriate level. Initially, we defined instructional level in the conventional manner, 95% accuracy with acceptable comprehension (Wixson & Lipson, 1991). We did find that children chose books that they could read at an appropriate level, although our view of what such a level might be in a program like this has changed. Children were choosing books that they could read with an average accuracy level of 95%, ranging, with one exception, from 92% to 100%. This level of material seems to be appropriate for them to gain practice in reading connected text. The one exception, as discussed above, chose his books for social reasons, because he was reading at a considerably lower level than the rest of his class.

We also wanted to know what influenced children's book choice. Here we found that the predominant influence was the teacher, not the other students. A book was more likely to be chosen if the teacher had read it aloud, if the teacher had specifically recommended it, or if the teacher had stressed the importance of reading more difficult material, as was the case in the two classes we studied. Where the teacher does not make such a recommendation, as in the classes studied by Ivey and Heubach (1994), children tend to read easier material. The influence of the teacher may be more pronounced at the second-grade level and similar results may not be found in older grades. Also, these were all teacher-centered classes, where children have not been explicitly prepared for making choices. Where children are more accustomed to making choices, peers may have more influence.

What Level of Material Should Children Be Reading?

Because students generally choose books at a 92% accuracy rate or higher, rather than the traditional 98%, we feel that this somewhat more difficult rate should be thought of as the child's instructional level, at least in a program similar to this. This somewhat more difficult level has also been suggested by Clay (1985) and Powell (cited in Wixson & Lipson, 1991) and adopted by Wixson and Lipson as well. We also have some evidence that children are able to gain instructionally from somewhat more difficult material than is traditionally assumed. This evidence comes from our observations of the effects of repeated reading on oral reading accuracy and rate.

Instructional Level?

These results suggest that children can benefit from reading material well below the 95% accuracy rate traditionally recommended for instruction (Wixson & Lipson, 1991). In fact, students appeared to benefit from reading stories in the first sampling even though they were reading them with an average accuracy rate of 85%, which would be considered the Frustration level. The reason why students were able to benefit from reading material at these lower levels of accuracy was the higher support they were given for the reading through the routines of the program. In this program, students were supported in their reading by having multiple exposures to the same material, by having the stories read to them, by exposure to the vocabulary prior to their own reading, by reading the story at home once or more, possibly by echo reading, and by partner reading. This high level of support is considerably greater than was provided in a traditional Directed Reading Activity.

We would like to suggest that the instructional level for a given child is inversely related to the degree of support given to the reader. That is, the more support given, the lower the accuracy level needed for a child to benefit from instruction. In classroom organizations such as our fluency-oriented instruction, students can benefit from reading material at greater relative difficulty because they are given greater amounts of support for that reading.

Another source of support for word recognition is pictures. Pictures in texts can improve

children's word recognition (Denburg, 1976–77), at least while the picture is present (although pictures can retard the development of context-free word recognition, since readers may rely on illustrations for cues [e.g., Singer, Samuels, & Spiroff, 1973–74]). Pictures can also aid in comprehension (see Schallert, 1980, for review). The use of picture books in early grades may support the ability of children to read material with lower numbers of words correctly recognized. This may account for the lower criteria for instructional level observed by Clay (1985) and Powell (cited in Wixson & Lipson, 1991) for primary grade readers. Such readers tend to read more heavily illustrated material, which indicates they are less reliant on knowing the words to read the text competently.

What Are the Effects of the Program on Struggling Readers?

The most pronounced effects of this program were on children who were struggling; that is, those reading above the primer level but not at second-grade level. As noted earlier (see Figures 3 and 5), all children reading at a primer level or higher at the beginning of the year were reading at the second-grade level by the end of the year. In ordinary classroom situations, these children will fall further and further behind the average for their grade (Juel, 1988; Stanovich, 1986). Programs that have successfully accelerated the growth of these readers have been either fairly expensive and difficult to implement, like Reading Recovery (Clay, 1985) or Success for All (Madden, Slavin et al., 1997), or have been directed to first graders. The approach taken here is easy to implement, involves only classroom teachers, and works with second-grade children.

The effects of this program on children who initially read below the primer level were mixed. About half of these children made adequate progress, the remainder did not. For these children, the teachers made special adaptations, including books with reduced vocabulary, providing extra time for reading, and so on. A program based on repeated readings of grade-level material requires a certain initial level of competence. For those without such competence, more intensive remediation is required.

Since our struggling readers had more exposure to the materials, through additional readings at home and through some additional work in class, they were able to read materials of much greater than expected difficulty. In turn, the reading of more difficult material aided their growth as readers, allowing them to read the second-grade material with more ease. This seems to be the opposite process to that involved in Matthew Effects (Stanovich, 1986). Stanovich suggests that struggling readers, because they read relatively easy material and read less of it than proficient readers, fall further and further behind their better achieving peers. Instead, we suggest that our classroom organization provides a mechanism for at least some children to catch up with their peers.

What Have We Learned?

This paper has presented a complex evaluation of a complex program, an attempt to re-

organize second-grade reading instruction around a set of theory-derived principles. For the most part, this reorganization was successful in achieving its goals. The program was sustainable over two years, teachers and children perceived it and its various components positively, and it lead to overall gains in achievement. These gains were found for all children reading at a primer level or higher initially and for about half of those who could not initially read a primer passage.

We also learned about the reciprocal nature of instruction and text difficulty. The traditional notion of instructional level, based as it was on a traditional notion of instruction, seems not to be relevant to this type of classroom setting. Instead, with the greater support given to readers through repeated readings of the instructional text in various venues and with various procedures, children were able to learn from material that they initially read with greater difficulty than expected. This program provides that structure in a form easily usable by teachers and responded to by students.

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APPENDIX

Interview Questions

Name_____ Class_____

I want to talk to you about the reading program in your class this year. We need to know about what you think about your reading program and the parts of it.

1. How do you like reading in your class?

2. What do you like best about reading in your class?

3. What do you like least about reading in your class?

4. Do you think that you have learned to read better this year?

5. What do you think about when the teacher reads to you from your reading book?

   a. Do you think that this helps you read?

   b. Do you think that this makes you more interested in reading?

6. What does the teacher usually do afterwards?

   a. What do you think about this?

   b. Do you think that this helps you read?

   c. Do you think that this makes you more interested in reading?

7. Do you practice reading the story at home?

a. About how many times? (If yes, above)

b. What do you think about this?

c. Do you think that this helps you read?

d. Do you think that this makes you more interested in reading?

8. What do you think about partner reading?

a. Do you think that this helps you read?

b. Do you think that this makes you more interested in reading?

c. Who do you read with most often?

d. Why did you choose that person?

e. Do you enjoy reading with _____?

f. How well does _____ read?

9. How often do you have DEAR time?

a. What do you think about this?

b. Do you think that this helps you read?

c. Do you think that this makes you more interested in reading?

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